BRAVO Zulu

The crew of Venom 513, Lt. Albert Zangrilli (HAC), Lt. Mike King (H2P), and AW1 Robert Bautista (SO), were conducting search-and-rescue training in the Indian Ocean. While established in a Doppler hover, the aircraft started to exhibit a one-per-revolution vertical vibration. As the vibration gradually increased in severity, the crew accurately diagnosed the main-rotor-damper failure and manually departed the hover. The crew executed the NATOPS procedures, called emergency flight quarters, and landed their SH-60B without incident on board USS *Leyte Gulf* (CG-55). The entire ship-air team is to be commended for their quick reactions in setting emergency flight quarters and flawlessly recovering their helicopter.

(From left) Lt. Mike King, AW1 (AW) Robert Bautista, and Lt. Albert Zangrilli.

During a Case III recovery to USS *Ronald Reagan* (CVN-76), aircraft 501 experienced severe nose-down pitch at low altitude. Lt. Matthew Maher completed the immediate-action procedures for uncommanded flight-control inputs and climbed to a safe altitude. Lt. Brien Croteau coordinated their situation with the ship. While Lts. Maher and Croteau worked through the applicable checklists, Lt. Marie Wise and LCdr. Christopher Bergen got bingo-fuel numbers for multiple configurations to NAS North Island. Despite all efforts, the aircraft's pitch trim was frozen at full nose-down. After testing the controllability of the aircraft during three approaches and maintaining full back-stick pressure, the crew flew an emergency divert to NAS North Island. Postflight analysis revealed a failed horizontal stab-trim actuator.

(From left) LCdr. Christopher Bergen, Lt. Matthew Maher, Lt. Marie Wise, Lt. Brien Croteau.

(From left) GySgt. Tom Burkhardt, 1stLt. Paige Payne, Capt. Dan Groeling, Sgt. Josh Gilbow and LCpl. Bart Davis.

During a January night flight, Capt. Dan Groeling, 1stLt. Paige Payne, GySgt. Tom Burkhardt, Sgt. Josh Gilbow and LCpl. Bart Davis, were flying a UH-1N in support of a convoy-escort mission in the Al Anbar Province of Iraq. Toward the completion of their uneventful escort mission, Capt. Groeling's crew in the Dash-2 position declared joker fuel with 450 pounds of fuel indicated, which alerted the lead AH-1W of their impending bingo-fuel state. Noting a squall line forming between the section's current position and Al Taqaddum Airbase, the crew adjusted their bingo fuel for a little extra time aloft if needed to circumnavigate the weather.

With about 425 pounds indicated, they received a caution-advisory light, meaning the right fuel-boost pump had failed. Capt. Groeling advised lead aircraft of the emergency and headed toward the airfield. Lead advised the convoy commander of the situation, made one more reconnaissance pass, and continued to join the Huey. About two minutes after receiving the caution light, the crew received a fuel-low caution light. According to NATOPS, after a boost-pump failure, any secondary fuel-system malfunction made this a land-as-soon-as-possible emergency.

Confusion set in among the crew because 400 pounds of fuel still were indicated, and the UH-1N NATOPS states the fuel-low light is not supposed to illuminate until 100 to 300 pounds are indicated. The crew immediately noted the time.

Capt. Groeling had remembered a maintenance-action form in the ADB that warned the next pilot to verify the low-fuel-light functionality, because, on a previous ground-turn test, the light had not come on until 20 pounds were indicated. With many confusing and conflicting indications, the crew assumed the float switch that gave the fuel-low light was malfunctioning, and they continued flight.

To avoid the city of Ramadi, the crew skirted along the shoreline of a large lake south of the hostile city for the 15-mile flight to the airfield. Because of the situation, the flight accepted a seven-knot tail wind for a straight-in to the approach end of runway 12L. After falling in trail of the lead AH-1W on short final, Capt. Groeling began the landing transition at 100 feet. But, a left boost-pump-caution light caused Capt. Groeling to expect an impending dual-engine flameout; they still had 300 pounds of fuel indicated.

As the aircraft crossed the displaced threshold, the No. 2 engine flamed-out 20 to 30 feet over the runway, and Capt. Groeling immediately transitioned to an autorotation profile. At five feet, the No. 1 engine flamed out, and he completed the autorotation to a skids level slide-on for more than 750 feet. The only damage was some slightly worn skid shoes that did not require immediate replacement.

The postflight inspection ruled out fuel contamination. Maintenance verified about 200 pounds of fuel still was available after the flameout. Later that night, they determined the source of the failure: The one-inch line connecting the two aft fuel cells had malfunctioned, causing the indicator to show fuel available, but the fuel was inaccessible by the fuel pumps, resulting in fuel starvation with usable fuel indicated.